

DBD BULLETIN

regards from
Rana...



Photo: DBD's Debra Kuehl, associate director for laboratory science, Jennifer Farrar, epidemiologist, and Brian Raphael, Legionella Laboratory lead, help set up a Photoshare World Pneumonia Day Exhibit at CDC's Atlanta campus on November 9, 2015.

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DIRECTOR'S SPOTLIGHT

Dear Colleagues,

Thank you for a very productive year! On behalf of all the OD staff, I wish you restful, safe, and happy holidays with your loved ones.

*Regards,
Rana*

November 12th Was World Pneumonia Day

Nearly one million children younger than five years of age die each year from pneumonia. As the most common infectious cause of death in this age group, pneumonia is responsible for 15% of all deaths, with most occurring in resource-limited settings. In developed countries, such as the United States, pneumonia continues to be a leading cause of hospitalization and death, mostly among adults. This infection can be prevented by immunization, adequate nutrition, and addressing environmental factors. Since 2009, people across the globe have annually come together for World Pneumonia Day to raise awareness and promote interventions to protect against, treat, and prevent pneumonia.

CDC is proud to join the Global Coalition against Childhood Pneumonia and our partners around the world in the fight against pneumonia. As the agency's lead point of contact on pneumonia, DBD engages in activities both globally and domestically to reduce the burden of this disease.

DBD staff provide laboratory and epidemiologic assistance to countries in Africa, Asia, and Latin America that have or plan to introduce pneumococcal conjugate vaccine (PCV) to evaluate vaccine impact and effectiveness. For example, DBD, in collaboration with the Robert Reid Cabral Children's Hospital, Dominican Republic Ministry of Health, and Pan American Health Organization are evaluating 13-valent PCV (PCV13) against invasive pneumococcal disease (IPD) in the Dominican Republic, which introduced the vaccine into its routine childhood immunization program in 2013. DBD's ongoing laboratory assessments and trainings for detection and characterization of bacterial respiratory pathogens are helping to strengthen in-country capacity for pneumonia diagnostics at World Health Organization regional laboratories and Ministry of Health national laboratories.

Great strides have been made regarding introduction of vaccines for two main bacterial causes of pneumonia, *Haemophilus influenzae* type b and *Streptococcus pneumoniae*. PCV, a highly effective intervention, has dramatically reduced the burden of pneumococcal disease in high-income countries and, with support from DBD staff, is increasingly being used in low- and middle-income countries where the pneumococcal disease burden is the greatest.

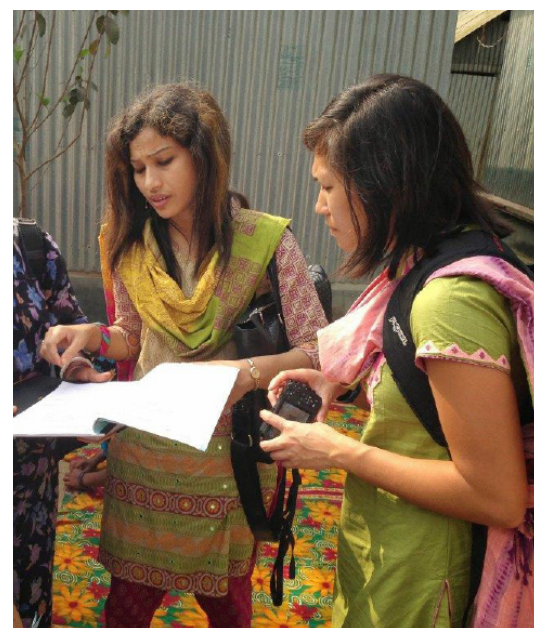


Photo: Jennifer Farrar (right), DBD epidemiologist, collaborating with Shampa Saha, senior research investigator at Bangladesh's Dhaka Shishu Hospital, on a study evaluating the impact of PCV.

...World Pneumonia Day continued

The drop in rates of IPD and carriage of vaccine-type *S. pneumoniae* among U.S. adults over the past decade has been linked to the use of PCV13 in children. In September 2014, the Advisory Committee on Immunization Practices (ACIP) recommended a single dose of PCV13, in addition to the 23-valent pneumococcal polysaccharide vaccine, for adults 65 years or older to prevent cases in this age group. Subsequently, DBD launched studies in the United States on PCV13 impact in adults 65 years or older, including a pneumococcal colonization study, a case-control study with an endpoint of IPD, and an analysis of pneumonia hospitalization trends. Data from these studies, along with information collected using DBD's Active Bacterial Core surveillance, will be shared with ACIP to help re-evaluate the adult pneumococcal vaccine policy in 2018.

DBD director **Rana Hajjeh**, notes that, "Over the years, DBD has played an integral role in introducing and evaluating vaccines that can prevent pneumonia, both domestically and globally. These activities are also consistent with CDC's Global Health Security Agenda, which aims to strengthen capacity for early detection of and response to respiratory disease outbreaks. Along with the Division of Viral Diseases and the Influenza Division, in collaboration with other CDC programs, DBD will develop tools to help countries around the world to detect and respond to respiratory events."



Photo: DBD medical epidemiologist Fernanda Lessa, with Johns Hopkins' Lee Harrison, demonstrates nasopharyngeal swabbing to staff from Johns Hopkins Bayview Medical Center and the Maryland Active Bacterial Core surveillance site as part of training to support specimen collection for a U.S. adult pneumococcal colonization study, launched in September 2015.

Traveling: Safety First

Safety comes first. CDC's global mission continues to expand and DBD staff are integral to that work, traveling all over the world. As Dr. Frieden noted, "We must take into account our personal security every time we travel, whether in the United States or abroad. Being prepared and knowing how to respond quickly will increase your chances of staying safe. It is important to have plans, including where you will go if you have to evacuate your hotel, how you will contact U.S. Government officials, and how you can get to local host government security personnel quickly."

Travelers should always provide others with updates to their travel itinerary if it changes. For any concerns or questions regarding global security or foreign travel training, contact CDC's Office of Safety, Security, and Asset Management, Public Health Intelligence Office: (404) 639-5000 or ossaminternationaltravel@cdc.gov.

New DBD Office of the Director Staff

Associate Director for Global Health Security



Sara Mirza, PhD, joined DBD as the associate director for Global Health Security (GHS). She will be responsible for coordinating and monitoring progress of all GHS activities within the division; liaising with NCIRD, the Center for Global Health, and other internal and external partners; and participating in design and implementation of epidemiologic studies, surveys, and interventions that DBD will engage in as part of GHS activities. Mirza will also serve as the lead epidemiologist for the GHS flagship project in Burkina Faso to establish surveillance systems for rapid detection of respiratory disease outbreaks.

Photo: Sara Mirza

Program Management Officer



Antonette Hill, MBA, joined DBD as the program management officer. She brings a wide experience in management, administration, and human resources from both within and outside of CDC. Prior to joining CDC, she worked as director of human resources for a large international corporate relocation provider, and served in the U.S. Navy, including active duty during the Persian Gulf War. She has worked at CDC since 2007, initially as a management specialist in NCIRD for the Advisory Committee on Immunization Practices, and subsequently as a management and program analyst and supervisory administrative officer with the Office of Public Health Preparedness and Response.

Photo: Antonette Hill

Ambassador to Haiti Visits CDC

When the U.S. Ambassador to the Republic of Haiti, Peter F. Mulrean, visited CDC in October 2015, DBD staff were able to brief him on in-country collaborations and diphtheria response capacity. From December 2014 through November 2015, Haiti reported 67 cases of probable diphtheria, representing a substantial increase as compared to the past five years. At least 20 people (30%) were reported to have died.

CDC-Atlanta provided technical advice, lab-confirmed 29 cases, and provided diphtheria antitoxin to treat some cases during gaps with in-country supply. DBD staff are working with laboratory, surveillance, and vaccination staff from the Ministry of Public Health and Population, Laboratoire National de Santé Publique (National Lab), Pan American Health Organization, CDC-Haiti, and affected hospitals and departments to better understand recent diphtheria outbreaks in Haiti and to discuss potential response activities.

Legionella Program Review, Board of Scientific Counselors, and New Staff Update



In September 2015, NCIRD hosted a *Legionella* Program Review. The inter-Center review included a series of presentations by DBD's **Laurel Garrison**, **Preeta Kutty**, **Claressa Lucas**, and **Brian Raphael** to update participants on the epidemiology of legionellosis in the United States and review the key challenges in preventing and responding to outbreaks. During a discussion facilitated by **Matt Moore**, this group of experts, representing a wide cross-section of multiple CDC Centers, identified and prioritized future program objectives for primary prevention and outbreak response.

In December, program staff gave a presentation to environmental and infectious disease specialists from two of CDC's Boards of Scientific Counselors on outcomes of the program review and the division's *Legionella* research and implementation agendas. In 2015, the DBD *Legionella* program responded to multiple *Legionella* outbreaks—with one in New York City being the largest community-associated Legionnaires' disease outbreak in the United States since the pathogen was discovered in 1976.

DBD's legionellosis team recently welcomed two new staff members: **Laura Cooley**, medical epidemiologist, and **Brian Raphael**, *Legionella* Laboratory lead.

Image: New DBD fact sheet describing Legionella advanced molecular detection work.

Advanced Molecular Detection Day

CDC's September 25th Advanced Molecular Detection (AMD) Day provided a forum for laboratory scientists, bioinformatics experts, and infectious disease epidemiologists to showcase the exciting accomplishments being made using AMD technologies, describe project results, discuss their AMD visions and goals, and network with colleagues. DBD was well-represented, with staff delivering two oral presentations and eight poster presentations:

Oral Presentations

During the AMD Day opening session, **Bernie Beall**, chief of DBD's *Streptococcus* Laboratory, presented on "National surveillance for resistant invasive streptococci: *S. pneumoniae*, *S. pyogenes*, and *S. agalactiae*." He also presented on "High throughput characterization of invasive pneumococci employing whole genome sequencing" during the "Ignite: AMD Storytelling" session.

Poster Presentations

Al Benitez, **Bernard Wolff**, **Maureen Diaz**, et al. presented "Targeted resequencing and metagenomic analysis to identify and characterize pathogens in respiratory specimens from unexplained respiratory disease outbreak (URDO) response."

Cecilia Kretz, **Ed Ramos**, **Fang Hu**, et al. presented "Development of genomic tools for detection and characterization of bacterial meningitis pathogens."

Jeff Mercante, **Natalia Kozak-Muiznieks**, **Shatavia Morrison**, et al. presented "Strengthening outbreak investigations by using genome sequencing to rapidly subtype *Legionella pneumophila* from environmental sources."



Photo: DBD's Heidi Soeters, EIS officer, reviews lab data with microbiologists from Haiti's Laboratoire National de Santé Publique during the 2014–2015 diphtheria outbreak in Haiti.

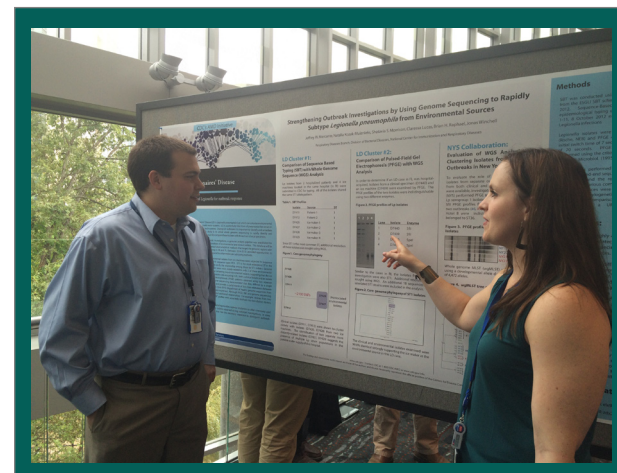


Photo: DBD's Bernard Wolff, a microbiologist in the Pneumonia Response and Surveillance Laboratory, answers a question from DBD's Anna Llewellyn, LLS fellow, about an unexplained respiratory disease outbreak response poster at CDC's 2015 AMD Day.

Continued on next page...

Advanced Molecular Detection Day continued...



Photo: DBD's Lucia Pawloski, a microbiologist in the Pertussis and Diphtheria Laboratory, discusses a Bordetella pertussis poster with NCEZID policy analyst, Amanda Raziano, at CDC's 2015 AMD Day.

Ben Metcalf, Yuan Li, Sopio Chochua, et al. presented “Employing short read whole genome sequence data for invasive pneumococcal strain surveillance, investigation of disease outbreaks, and genome-wide association analyses.”

Lucia Pawloski, Marsenia Harrison, Marina Chesnokova, et al. presented “The use of AMD to identify vaccine immunogen-deficient *Bordetella pertussis* isolates.”

Adam Retchless, Fang Hu, Rasmata Traoré, et al. presented “The establishment and diversification of epidemic-associated serogroup W meningococcus in the meningitis belt.”

Roman Tatusov, Ed Ramos, Cecilia Kretz, et al. presented “Comparative genomics approach for identification of serotypes/serogroups of bacterial meningitis pathogens.”

Michael Weigand, Katie Bowden, Yanhui Peng, et al. presented “A history of genome structural fluidity during the resurgence of *Bordetella pertussis* in the United States.”

IDWeek

IDWeek 2015 was held in San Diego, CA, on October 7–11, 2015. A number of DBD staff gave presentations:

- **Anna Acosta** (MVPDB) presented a talk on “Acellular pertussis vaccine effectiveness among children and adolescents in the setting of pertactin-deficient pertussis, Vermont, 2011–2013.”
- **Miwako Kobayashi** (RDB) presented the poster “Outpatient antibiotic prescribing practices for uncomplicated urinary tract infections in women in the United States, 2001–2010.”
- **Heidi Soeters** (MVPDB) presented the poster “Rapid response to a Rhode Island college outbreak of meningococcal serogroup B disease: Nation’s first widespread use of Trumenba® vaccine.”

DBD staff also contributed to the following posters: “Vaccination with pneumococcal polysaccharide vaccine is associated with detection of specific pneumococcal serotypes in adults hospitalized for community-acquired pneumonia,” “Third trimester Tdap immunization elicits substantial pertussis toxin IgG in neonates,” and “Effectiveness of Tdap vaccination during pregnancy in preventing infant pertussis in a country with whole-cell pertussis vaccines during childhood: Preliminary results of a case-control study in Argentina.”

MenAfriNet Hosted 2nd Annual Partners Meeting

MenAfriNet hosted 68 international and African partners in Niamey, Niger, for its 2nd annual meeting on October 20–22, 2015. Participants reviewed surveillance and laboratory capacity building activities and discussed lessons learned from the 2015 MenAfriNet response to the Niger serogroup C meningococcal meningitis outbreak—the largest ever epidemic of this disease serogroup.

Practitioners collaborated to develop a set of recommendations to guide MenAfriNet preparedness activities in countries at highest risk for serogroup C epidemics during the 2016 meningitis season. MVPDB’s **Ryan Novak**, MenAfriNet director, was joined by **Anna Acosta**, **Flavien AKE**, **Oumar Diallo**, **Temitope Folaranmi**, **Rana Hajjeh**, **Brian Harcourt**, **Sarah Meyer**, **Stephanie Schwartz**, **Heidi Soeters**, **Ashley Tate**, **Tej Tiwari**, and **Xin Wang** in coordinating and participating in the meeting.



Photos: Attendees of MenAfriNet’s 2nd Annual Partners Meeting (top). DBD’s Anna Acosta (right), epidemiologist, with Madame Oumou Yacouba Coulibaly, epidemiologic surveillance data manager (National level–Mali) exchange ideas at the 2015 MenAfriNet Partners Meeting in Niamey, Niger, October 2015.



Pertussis: Biology, Epidemiology, and Prevention Meeting

Les Pensières, Foundation Merieux hosted the Pertussis: Biology, Epidemiology, and Prevention Meeting in Veyrier-du-Lac, France, on November 11–13, 2015. The meeting brought together experts to explore the latest trends in pertussis epidemiology, discuss potential ways in which pertussis vaccines might be improved and the practicalities of their introduction into routine use, and formulate recommendations for optimal use of current vaccines. There was a particular focus on strategies to minimize severe morbidity and mortality among infants during the first months of life.

Stacey Martin, **Tami Skoff**, and **Conrad Quinn** from MVPDB attended, with Martin presenting “Overview of pertussis epidemiology in the United States and impact of vaccination.”

Global Health Security Site Visit to Burkina Faso

During the week of November 9, 2015, DBD’s **Sara Mirza**, **Matt Moore**, **Heidi Soeters**, and **Velusamy Srinivasan** met with the Burkina Faso Ministry of Health to develop the Global Health Security flagship

protocol to prevent, detect, and respond to clusters of acute respiratory illness. The group also discussed next steps in the collaboration being established to evaluate the impact of PCV13 introduction in the country.



Photo: DBD’s Stacey Martin, Tami Skoff, and Conrad Quinn participated with other pertussis experts in the Pertussis: Biology, Epidemiology, and Prevention Meeting in Veyrier-du-Lac, France, in November 2015.

WHO Global IB-VPD Surveillance Meeting

The World Health Organization (WHO) Global Invasive Bacterial Vaccine Preventable Diseases (IB-VPD) and Rotavirus Sentinel Site Surveillance Meeting was held November 16–20, 2015 in Geneva, Switzerland, with the goal of sharing information and discussing the status and future directions of WHO-coordinated Global IB-VPD and Rotavirus Sentinel Site Surveillance Networks. DBD serves as a Global Reference Lab for this network and **Jennifer Farrar**, **Rana Hajjeh**, **Mahamoudou Ouattara**, **Stephanie Schwartz**, **Chris Van Beneden**, and **Xin Wang** participated. Through a series of presentations, the DBD team was able to demonstrate the overall progress the network has made over time (2009 to present), especially in strengthening laboratory systems at the regional level. The team also provided strategic guidance for areas of needed growth and development and for future directions, such as the potential for a more targeted focus in vaccine impact studies in order to allow countries to use the data for decision-making.

CDC Public Health Grand Rounds

Conrad Quinn, MVPDB chief, presented at CDC’s December 2015 Public Health Grand Rounds on “Strengthening a Culture of Laboratory Safety.” He was joined by CDC’s associate director for laboratory science Steve Monroe and Joseph Kanabrocki, associate vice president of research safety and professor of microbiology at the University of Chicago. In the late 1990s, the U.S. Congress mandated CDC carry out a research program on the safety and efficacy of the anthrax vaccine. In his presentation, “Quality, safety, and public health impact of laboratory science: A case study,” Quinn discussed the processes the agency undertook to set up the lab responsible for studying the anthrax vaccine. He cited the leadership, specific teams and skill sets, procedures, and rigorous quality and safety controls that were required to conduct the successful anthrax vaccine clinical trial. He cited these as examples of the investments needed to assure quality science and laboratory safety in public health and healthcare settings. Quinn stressed that maintaining quality management systems does not limit productivity. Quality Assurance enables CDC to demonstrate that the public trust in our science and recommendations is not misplaced. He urged all CDC laboratorians and leadership to always embrace a culture of laboratory quality, safety, and continuous improvement.

Sustainability Star

MVPDB's **Katie Bowden**, a biologist in DBD's Pertussis and Diphtheria Laboratory (PDL), and other PDL staff were recognized by CDC's Office of Safety, Security, and Asset Management for their exemplary action for positive, sustainable change in the workplace for completing a project to replace 11 outdated Biological Safety Cabinets (BSCs) in lab Building 17. The state-of-the-art replacement units being installed will increase energy savings and improve safety for CDC workers.

The NuAire units have user-friendly control panels, real-time monitoring, automated alarms, airflow monitors, and a variety of proper light settings. These new settings will provide a safer lab experience for workers by reducing the possibility of exposure to harmful aerosols. The BSCs' energy consumption feature is estimated to save about \$2,000 per unit over a 15-year lifespan.

Along with energy savings, real-time monitoring provides immediate alerts and alarms if the system is not operating safely. In addition, the new cabinets are more ergonomic.



Photo: Katie Bowden, biologist in DBD's Pertussis and Diphtheria Laboratory, working at a NuAire Biological Safety Cabinet.

Epi-Aids & Outbreak Investigations

Group A Streptococcal Epi-Aid—Sangamon County, Illinois, November 2015. A team was deployed to assist the Illinois Department of Public Health in determining the extent of an outbreak in a long-term care facility, evaluating infection control practices, and implementing control and prevention measures.

Meningococcal Carriage Evaluation—Rhode Island, September 2015. A team of epidemiology and laboratory staff was deployed to conduct the third round of a *Neisseria meningitidis* carriage evaluation following a serogroup B outbreak at a college.



Photo: DBD's Sana Ahmed, EIS officer, collecting an environmental sample from a shower faucet during a Legionnaires' disease outbreak Epi-Aid in Hannibal, Missouri, in November 2015.

Meningococcal Carriage Evaluation—Oregon, October 2015. A team of epidemiology and laboratory staff was deployed to conduct the third round of a *Neisseria meningitidis* carriage evaluation following a serogroup B outbreak at a university.

Legionnaires' Disease Epi-Aid—Quincy, Illinois, September 2015. A team was deployed to assist the Illinois Department of Public Health to investigate and respond to an outbreak of Legionnaires' disease associated with a veterans' home.

Legionnaires' Disease Outbreak—Cruise ship, November 2015. Support was provided to a cruise ship in investigating and responding to an outbreak of Legionnaires' disease.

Legionnaires' Disease Epi-Aid—Hannibal, Missouri, November 2015. A team was deployed to assist the Missouri Department of Health & Senior Services to investigate and respond to an outbreak of Legionnaires' disease associated with a hotel.

Meningitis Documentary

Rockhopper Productions' new meningitis documentary, "Meningitis: A Shot of Hope," published by PATH programs on YouTube in October 2015, examines the global response to devastating meningitis A outbreaks in Africa and the rapid development of an affordable vaccine to eliminate recurring epidemics. View at: <https://www.youtube.com/watch?v=-qGPOHThlQQ&feature=youtu.be>.

Public Health Matters Blog

The blog "Keeping Cool Under Pressure: NYC Legionnaires' Disease Outbreak, Summer 2015" is now available on CDC's Public Health Matters Blog. The blog highlights the CDC and partner response to the largest community-associated outbreak of Legionnaires' disease since the pathogen was discovered in 1976. Read at: <http://blogs.cdc.gov/publichealthmatters/2015/09/keeping-cool-under-pressure-nyc-legionnaires-disease-outbreak-summer-2015/>.

Legionella Website and Toolkit Launched October, 2015

DBD's new *Legionella* website and toolkit, released in October 2015, includes resources for the public, clinicians, laboratorians, environmental health specialists, and media, including six instructional videos on environmental aspects of legionellosis outbreak investigations, and outbreak investigation tools and data collection forms. Visit www.cdc.gov/legionella.

YouTube



Photo: A series of new *Legionella* training videos feature DBD's Laurel Garrison, epidemiologist, and Matt Westercamp, EIS officer, along with CDC environmental health specialist Jasen Kunz.

Publication Highlights

Meningitis Vaccine Project Special Issue

A special issue of *Clinical Infectious Diseases* collected outcomes and science from the Meningitis Vaccine Project, including 11 publications with DBD authors:

- Diallo A, Sow SO, Idoko OT, et al. **Antibody persistence at 1 and 4 years following a single dose of MenAfriVac or quadrivalent polysaccharide vaccine in health subjects aged 2–29 years.** *Clin Infect Dis.* 2015;61(suppl 5):S521–30.
- Diomandé FV, Djingarey MH, Daugla DM, et al. **Public health impact after the introduction of PsA-TT: The first four years.** *Clin Infect Dis.* 2015;61(suppl 5):S467–72.
- Diomandé FV, Yaméogo TM, Vannice KS, et al. **Lessons learned from enhancing vaccine pharmacovigilance activities during PsA-TT introduction in African countries, 2010–2013.** *Clin Infect Dis.* 2015;61(suppl 5):S459–66.
- Djingarey MH, Diomandé FV, Barry R, et al. **Introduction and rollout of a new group A meningococcal conjugate vaccine (PsA-TT) in African meningitis belt counties, 2010–2014.** *Clin Infect Dis.* 2015;61(suppl 5):S434–41.
- Holme D, Findlow H, Sow SO, et al. ***Neisseria meningitidis* group A IgG1 and IgG2 subclass immune response in African children aged 12–23 months following meningococcal vaccination.** *Clin Infect Dis.* 2015;61(suppl 5):S563–9.
- Price GA, Hollander AM, Plikaytis BD, et al. **Human complement bactericidal responses to a group A meningococcal conjugate vaccine in Africans and comparison to responses measured by 2 other group A immunoassays.** *Clin Infect Dis.* 2015;61(suppl 5):S554–62.
- Roy Chowdhury P, Meier C, Laraway H, et al. **Immunogenicity of yellow fever vaccine coadministered with MenAfriVac in healthy infants in Ghana and Mali.** *Clin Infect Dis.* 2015;61(suppl 5):S586–93.
- Tang Y, Plikaytis BD, Preziosi MP, et al. **Influence of age on antibody response and persistence following immunization with MenAfriVac.** *Clin Infect Dis.* 2015;61(suppl 5):S531–9.
- Tapia MD, Findlow H, Idoko OT, et al. **Antibody persistence 1–5 years following vaccination with MenAfriVac in African children vaccinated at 12–23 months of age.** *Clin Infect Dis.* 2015;61(suppl 5):S514–20.
- Tapia MD, Sow SO, Haidara FC, et al. **A Phase 3, double-blind, randomized, active controlled study to evaluate the safety of MenAfriVac in healthy Malians.** *Clin Infect Dis.* 2015;61(suppl 5):S507–13.
- Vannice KS, Keita M, Sow SO, et al. **Active surveillance for adverse events after a mass vaccination campaign with a group A meningococcal conjugate vaccine (PsA-TT) in Mali.** *Clin Infect Dis.* 2015;61(suppl 5):S493–500.

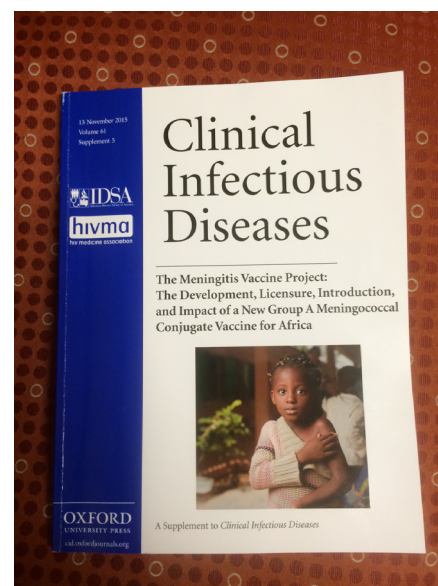


Image: The special issue of *Clinical Infectious Diseases* reporting on the Meningitis Vaccine Project.

Emerging Infections Program Theme Issue

A special issue of *Emerging Infectious Diseases* documented 20 years of achievements from CDC's Emerging Infections Program, including four publications with DBD authors:

- Langley G, Besser J, Iwamoto M, et al. **Effect of culture-independent diagnostic tests on the future of Emerging Infections Program surveillance.** *Emerg Infect Dis.* 2015;21(9):1582–8.
- Langley G, Schaffner W, Farley MM, et al. **Twenty years of Active Bacterial Core surveillance.** *Emerg Infect Dis.* 2015;21(9):1520–8.
- Moore MR, Whitney CG. **Use of pneumococcal disease epidemiology to set policy and prevent disease during 20 years of the Emerging Infections Program.** *Emerg Infect Dis.* 2015;21(9):1551–6.
- Skoff TH, Baumbach J, Cieslak PR. **Tracking pertussis and evaluating control measures through enhanced pertussis surveillance, Emerging Infections Program, United States.** *Emerg Infect Dis.* 2015;21(9):1568–73.

Diaz MH, Benitez AJ, Winchell JM. **Investigations of *Mycoplasma pneumoniae* infections in the United States: Trends in molecular typing and macrolide resistance from 2006 to 2013.** *J Clin Microbiol.* 2015;53(1):124–30.

Edison L, Beaudoin A, Goh L, et al. **Scabies and bacterial superinfection among American Samoan children, 2011–2012.** *PLoS ONE.* 2015;10(10):e0139336.

Faulkner A, Skoff TH, Tondella L, et al. **Trends in U.S. pertussis diagnostic testing, 1990–2012.** *Pediatr Infect Dis J.* 2015 Sep 24. [Epub ahead of print].

Grijalva CG, Wunderink RG, Zhu Y, et al. **In-hospital pneumococcal polysaccharide vaccination is associated with detection of pneumococcal vaccine serotypes in adults hospitalized for community-acquired pneumonia.** *Open Forum Infect Dis.* 2015;2(4):ofv135.

Hao Y, Balluz L, Strosnider H, et al. **Ozone, fine particulate matter, and chronic lower respiratory disease mortality in the United States.** *Am J Respir Crit Care Med.* 2015;192(3):337–41.

Jauregui B, Felix Garcia AG, Janusz CB, et al. **Evidence-based decision-making for vaccine introductions: Overview of the ProVac International Working Group's experience.** *Vaccine.* 2015;33(s1):A28–33.

Metcalfe BJ, RE Gertz, RA Gladstone, et al. **Strain features and distributions in pneumococci from children with invasive disease before and after 13-valent conjugate vaccine implementation in the United States.** *Clin Microbiol Infect.* 2015 Sep 10. [Epub ahead of print].

Mustapha M, Marsh J, Krauland M, et al. **Genomic epidemiology of hypervirulent serogroup W, ST-11 *Neisseria meningitidis*.** *EBioMedicine.* 2015;2(10):1294–5.

Nix EB, Williams K, Cox AD, et al. **Naturally acquired antibodies against *Haemophilus influenzae* type a in aboriginal adults, Canada.** *Emerg Infect Dis.* 2015;21(2):273–9.

Petrone BL, Wolff BJ, DeLaney AA, et al. **Isothermal detection of *Mycoplasma pneumoniae* directly from respiratory clinical specimens.** *J Clin Microbiol.* 2015;53(9):2970–6.

Piralam B, Tomczyk SM, Rhodes JC, et al. **Incidence of pneumococcal pneumonia among adults in rural Thailand, 2006–2011: Implications for pneumococcal vaccine considerations.** *Am J Trop Med Hyg.* 2015 Oct 26. [Epub ahead of print].

Skoff TH, Kenyon C, Cocoros N, et al. **Source of infant pertussis infection in the United States.** *Pediatrics.* 2015;136(4):635–41.

Weigand MR, Changayil S, Kulasekarapandian Y, et al. **Complete genome sequences of two *Bordetella hinzii* strains isolated from humans.** *Genome Announcement.* 2015;3(4):e00965–15.

Wolff BJ, Morrison SS, Pesti D, et al. ***Chlamydia psittaci* comparative genomics reveals intraspecies variations in the putative outer membrane and type III secretion system genes.** *Microbiology.* 2015;161(7):1378–91.

Have ideas for the DBD Bulletin?

If you have ideas for what topics to highlight in the next DBD Bulletin, please let Alison Albert know at apalbert@cdc.gov. Thank you!